DEERING
Health Clinic

Alaska Rural Primary Care Facility
Code and Condition Survey Report

July 23, 2001

I. EXECUTIVE SUMMARY

Overview

The Deering Clinic is a unique structure constructed as part of a water treatment building/washeteria complex in 1978. The washeteria and water treatment building portions of the complex are scheduled for demolition/removal in the near future. The clinic will be needed until it can be replaced. The site selected for the new clinic is located near the new generator/water treatment plant.

Renovation and Addition

The existing clinic is 820 s.f. and would require an addition of 1180 s.f. to meet the 2000 s.f. minimum area recommended for a medium clinic by the Alaska Rural Primary Care Facility study. The floor plan layout would require the remodel of approximately 75% of the interior space. Additionally, the poor condition of the building will require extensive upgrades to improve the foundation, thermal enclosure and other building systems. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 139% of the cost of a new clinic.

New Clinic

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 2000 s.f. should be built to replace the existing clinic. The community has identified a site for a new clinic near the existing clinic. The site is near utilities, the school, and other community services and is of adequate size to accommodate a larger structure. A new clinic has been funded by the Denali Commission under their "Fast Track" Small Clinic Program.

II. GENERAL INFORMATION

A. The Purpose of the Report

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility (ARPCF) assessment, planning, design, and construction. The purpose of the Code and Condition Survey Report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2.

B. The Assessment Team

The survey was conducted on May 21, 2001. John Crittenden, AIA, Architects Alaska and Bill Henriksen, PE, RSA Engineering completed the field inspection for this project. Mark Anderson of ANTHC and Jim Howell of Maniilaq Association were the team escorts. Mark reviewed alternative site locations with village leaders. Jim is an Environmental Health Specialist for the region and this trip accounted for one of his scheduled community visits. Both Mark and Jim knew the village contacts personally and made introductions and conducted the village briefings. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation

The format adopted is similar to the “Deep Look”, a facility investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

III. CLINIC INSPECTION SUMMARY

A. Community Information

The community of Deering has a current population of 136 as published in the 2000 U.S. Census. It is located 57 miles southwest of Kotzebue in the Cape Nome Recording District. It is a part of the NANA Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C for more community information.

B. General Clinic Information

The Deering Clinic is an 820 s.f. wood frame clinic with a reasonably efficient plan, however, changes in technology and health care delivery has made this plan obsolete. Similarly, population increases in the area have made this clinic seriously undersized for the need. The clinic is 1180 s.f. less than the ARPCF minimum of 2000 s.f. for a medium sized clinic.

C. Program Deficiency Narrative

The existing clinic consists of two exam rooms, one of which doubles as a sleep room/lab/med room. There is a large waiting area, a very small toilet and a very cramped office area adjoining a small storage area used for medical supplies. New medical equipment and computer equipment crowds the existing workspace. The main exam room is very tight. The space is further crowded by a counter that runs along almost the entire sidewall narrowing the space down to about five feet or less for an exam bed and access space. An immediate change that would improve this main exam room would be to relocate the bank of cabinets to the head of the exam table, or remove them from the room entirely. Changes required to improve plan deficiencies would involve the entire clinic. New office space is needed, space for storage of medical equipment, including EMS supplies. A larger trauma space is needed. A new, larger toilet room is needed that incorporates a shower or bath. This clinic is overdue for renewal/addition or replacement.

The following table illustrates a comparison between the current actual square footage (SF) and the 2000 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study for a Medium Clinic:

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Existing Net SF	#	ARPCF Medium	Difference
Arctic Entry	1	20	2	2 @ 50=100	80
Wait/Recep/Closet	1	103	1	150	47
Trauma/Telemed/Exam	2	226	1	200	-26
Office/Exam	1	112	1	150	38
Admin./Records	2	274	1	110	-164
Pharmacy/Lab		-	1	80	80
Portable X-ray		-		-	-
Spec. Clinic/Health Ed./Conf.		-	1	150	150
Patient Holding/Sleep Room		-	1	80	80
Storage	1	22	1	100	78
HC toilet	1	36	2	2 @ 60=120	84
Janitorial Closet		-	1	30	30
Total Net Area				1270	
Mechanical Room	1	0		147	147
Morgue				30	30

The Deering Clinic has a current gross area of 820 s.f. This would require a gross building area expansion of approximately 1180 s.f. in order to meet the 2000 s.f. minimum ARPCF requirement for a Medium Clinic.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries**: The front door has an arctic entry which is nominally 4' x 8'. The back door shares an arctic entry with the washeteria and has a pair of doors that allows access to the generator room. The door from there into the clinic is only 36" wide. It does provide a sheltered way into the clinic.

- **Waiting:** A disproportionate share of the building is devoted to waiting, approximately 20 percent of the total. This cuts into area that could be used for meds storage, office area, etc.

- **Trauma/Telemed/Exam:** There is no trauma space. The telemed equipment is located in the hallway, essentially in the middle of the main circulation.

- **Office/Exam:** This clinic has two exam rooms that are not used for offices. These rooms are adequate for examinations. One of the rooms serves more as a supply storage room/sleep room. The one room used for most exams has casework along the long wall that makes the space too narrow for all the diagnostic equipment that is used.

- **Administration/Records:** The administration area is about 80 s.f. with circulation through it to a small medical supply storage room. It is adequate for one person, yet three people work in the clinic.

- **Pharmacy/Lab:** All lab procedures occur within one of the two generic exam rooms. This is acceptable as long as this room is the lesser used of the three rooms.

- **Specialty Clinics:** The clinic cannot accommodate specialty clinics.

- **Patient Holding/Sleep:** One of the exam rooms is sometimes used.

- **Storage:** A small storage room (5' x 11') keeps the main medical/medicinal supplies. It is poorly organized because of the use of oversized storage cabinetry.

- **HC Toilet Room:** The toilet room is undersized for handicapped access. The bathing facilities are in the water treatment portion of the building and are not always available or working.

- **Janitor Closet:** None. The building borrows its heat and water systems from the adjacent utility building.

- **Ancillary Spaces:** There are no ancillary spaces in this clinic.

D. Architectural/Structural Condition

The building structure is in relatively good shape for its age. The foundation system appears to be wood sleepers on gravel. Snow and the lack of access openings restricted a complete evaluation of the foundation, however, the building is relatively level, without major deformation or sticking doors and windows. Recent flooding due to frozen piping has caused serious deterioration of floor supports and plywood subfloor. Work completed after the last flood revealed extensive deterioration under the bathroom. The plywood flooring was restored during that process, but work was limited to that one room. The building is linked to a hallway, which ties together the old generator room, the old washeteria, and the old water treatment building, currently scheduled for demolition. If those buildings are demolished a new back landing and stair will have to be constructed.

This building is conventionally constructed with trussed roof; 2x6 insulated walls, and a joist and beam floor. Minimal insulation is provided given current building construction standards. A complete thermal upgrade of this building is recommended to achieve good energy

efficiency including floor, walls and roof. There is currently no attic ventilation. The dryness of the climate may not require ventilation. It is important to investigate all truss areas, particularly above the toilet room, prior to reinsulating the attic, however, overframing on the roof with rigid insulation and complete re-roofing may be an appropriate method to supplement the roof insulation. Alternative methods exist if attic ventilation is required.

The building should have a new foundation if it is to be reused and restored. This site may not warrant a triodetic foundation due to the historical stability of the existing building. A new foundation should elevate the building and include new subsurface rigid insulation, gravel fill and new building pads. This method is assumed in the deficiency listing.

E. Site Considerations

The clinic is attached to an old washeteria and water treatment plant which are scheduled for demolition as they have already been replaced. The site where this clinic sits is ideal for the community and it is near the new washeteria, generator, and water treatment building. When the attached facilities are removed there will be good open site area for the development of a replacement clinic or an addition/remodel. However, the community has identified an alternative location for the clinic. The cost of demolition and relocation of buildings is not included in this analysis.

Utilities include village water, sewer, power, and telephone service. The sewer appears to shares a common branch to the old washeteria. This was evident when freeze-up in the common branch last winter resulted in sewer back up from the washeteria into the clinic.

F. Mechanical Condition

Heating and Fuel Oil: The prime source of heating for the clinic is a Toyostove Laser 72 oil heater located in the waiting area of the clinic. A hydronic unit heater is also located in the lobby, but was not in use at the time of our visit. The unit heater will be out of service and may be removed when the attached washeteria is demolished during the summer of 2001. Fuel oil is provided to the Toyostove from a UL listed tank located next to the building. The tank needs to be relocated a minimum of 5 feet away from the building. It also needs to be supported properly and have its piping and accessories replaced and supported between the tank and the Toyostove.

Ventilation: There is no mechanical ventilation for the clinic except the bathroom exhaust fan, which was inoperable at the time of the inspection. The only other source of ventilation for the occupied spaces is though operable windows. Building occupants complain about stale and stuffy air.

Plumbing: Hot and cold water are provided from the old washeteria. Since the washeteria will be demolished in the summer the cold water line will need to be re-routed into the clinic and a water heater will need to be installed. Due to snow and skirting around the perimeter of the clinic we were unable to inspect the sewer service to the building, but we determined it would

need to be modified to accommodate the demolition of the old washeteria. When the sewer service is modified it will need to be designed and installed in a manner to protect it from freezing since this has been a chronic problem following the construction of the new washeteria. Plumbing fixtures in the clinic include a toilet and lavatory in the restroom, nether meeting ADA requirements, and a sink in each of the two exam rooms. There is no mop sink in the clinic and water for house keeping is provided through a hose connection from the lavatory in the restroom. This is a code and health problem since the system is not protected with a vacuum breaker and cross contamination can occur.

G. Electrical Condition

Power: 120/240-volt single-phase power is provided to the clinic through an overhead service. The overhead service passes over the roof of the building with less than 8 feet of clearance. A 100-amp breaker is provided after the meter and a 125-amp panel is provided inside the building. The conductors were all copper. The system appears to be grounded correctly with a grounding wire extending from the meter base down below the building inside the skirting. Snow blocked access below the building so we were unable to determine if the grounding wire was connected to a grounding rod or the foundation. The electrical panel had 8 breakers in the panel, two were spares and the panel has a maximum capacity for 12 breakers. All wiring from the panel to the clinic has been run in Romex. Receptacles are provided throughout the building, but the staff indicated they needed more. We also noted that many of the receptacles had plug strips. Receptacles within 10 feet of exam room sinks or the restroom sink were not GFIC protected. There were no receptacles on the outside of the building.

Lighting and Emergency Fixtures: Surface mounted florescent fixtures with double 4-ft. 35-watt 40F bulbs are used throughout the building. The lighting levels appeared and were reported as low. The fixtures should be replaced as part of a renovation. Emergency light fixtures plug into receptacles and were installed in the waiting area adjacent to the front exit and one of the exam rooms. The batteries on both emergency light fixtures are in good condition. Exterior lighting was provided with incandescent fixtures at the entrances only. The fixtures were in poor condition and need to be replaced. Self-illuminating exit signs were installed over the exits. Two battery-operated smoke detectors were installed. One is located in the office and one in the waiting area.

Telecommunications: three phone lines serve the building, one for the local incoming line, a fax line and a dedicated line for communication with the Kotzebue Hospital. A new line is to be installed in the exam room used as the counseling office. A new Telemed system was recently installed.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes:

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

02 **Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.

03 **Safety:** These deficiencies identify miscellaneous safety issues.

04 **Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.

05 **Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans.

07 **Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.

08 **Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.

11 **Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 **Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.

13 **Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.

14 **Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency) The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

  Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.

  Design Services is included at 10% to cover professional services including engineering and design.

  Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

  Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Deering is projected to be:**

Base Anchorage Cost per s.f.		$183/ s.f.
Medical Equipment Costs @ 17%		$31
Design Services 10%		$18
Construction Contingency 10%		$18
Construction Administration. 8%		$15
Sub-total		$265/ s.f.
Area Cost Factor for Deering	1.52*	
Adjusted Cost per s.f.		$404/ s.f.

Total Project Cost of NEW BUILDING 2,000 x $404 = $808,000

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)
90% of cost of code/condition improvement** $240,918 Renovation

Projected cost of remodeling work (See A05)
820 s.f. clinic @ 100% remodel = 820 s.f. $100,902 Remodel

Projected cost of building addition (See A07)
2,000 s.f. – 820 s.f. = 1,180 s.f. $538,675 Addition
Design 10%, Const. Contingency 10%, Const. Admin. 8% $246,539

Total Project Cost of REMODEL ADDITION $1,127,034

- **Ratio of remodel:new is $1,127,034 : $808,000 = 1.39X**

The cost of a remodel/addition for this clinic would cost 139% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Deering.

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